PREPARED IN COOPERATION WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
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AIR PA/ DB0378S/RN100788959/7711A/PA

City of Dallas, Air Pollution Control Program
Investigation Report
Building Materials Corporation of America
CN602717464

GAF MATERIALS

RN100788959

Investigation # 1054561 **Incident #**

Investigator: MARILYN FITZNER **Site Classification**

Conducted: 01/17/2013 -- 01/17/2013 **SIC Code:** 2952
NAIC Code: 324122

Program(s): AIR NEW SOURCE PERMITS

Investigation Type : Site Assessment File Review **Location :** 2600 Singleton Blvd

Additional ID(s) : 7711A
DB0378S

Address: 2600 SINGLETON BLVD; DALLAS, TX 75212 **Activity Type :** CITY OF DALLAS LOCAL PROGRAM
PMPRCH116 - AIR PMPR - CHAPTER 116 PERMIT PROVISION REVIEW

Principal(s) :

Role	Name
RESPONDENT	BUILDING MATERIALS CORPORATION OF AMERICA
RESPONDENT	BUILDING MATERIALS CORPORATION OF AMERICA

Contact(s) :

Role	Title	Name	Phone

Other Staff Member(s) :

Role	Name
Supervisor	JONI KEACH

Associated Check List

Checklist Name	Unit Name
AIR PERMITS REQUEST FOR COMMENTS AND NSR PERMIT CONDITION	GAF

Investigation Comments :

INTRODUCTION
On 01/14/2013 the City of Dallas Local Air Program received a Request for Comments- Draft Conditions for GAF Materials Corporation located at 2600 Singleton Blvd, Dallas TX. The purpose of this review was to assess the draft permit application for a revision to TX Permit 7711A due to upgrading of a boiler. On 01/17/2013 Marilyn Fitzner, Investigator for the Dallas Local Program, reviewed the draft conditions and the permit application submitted by GAF. (See Attachment 1 --Request for Comments)
Daily Narrative:

A smaller capacity boiler was replaced by a larger one necessitating the need to 1) readjust the MEART numbers due to the higher emissions, 2) remove a special condition relating to the hours of operation required for the smaller boiler and 3) match the recordkeeping to the new boiler output. The draft of the new Special Conditions addressed all three items. Two emission points will be impacted and will have maximum allowable emission rates increased. The allowable rates are within regulatory requirements.
Exit Interview: The response to the Request for Comments was e-mailed to TCEQ -Austin, on 01/17/2013. Deadline was 02/04/2013.

GENERAL FACILITY AND PROCESS INFORMATION
GAF Materials manufactures roofing shingles. GAF has been at its present location for over 20 years, but a roofing facility has been at this site since the 1940's. The facility has approximately 200 employees. The plant operates three shifts per day, 24 hours per day 7 days per week. Line #1 makes conventional shingles. Line #3 makes laminate shingles. Large rolls/webs of fiberglass are fed into both shingle lines. Both surfaces of the fiberglass are coated with an asphalt and limestone mixture. The mixture is piped in from outdoor heated storage silos. After coating, a controlled layer of granules is dropped and embedded into the upper surface of the mat. The mat is flipped and a thin layer of sand is applied to the lower surface. The granules are received from hopper cars and bottom-loaded to silos via a bucket elevator. The granules are conveyed into the processing equipment. Fifteen silos contain granules and one is reserved for sand for Line #3. The silos are not equipped with dust collectors but the granules don't pose a particulate issue. Two outdoor bins hold non-colored, headlap (unexposed area of shingle) granules. Two roof-mounted, pulse air baghouses are located here; one unit for the 120 ton filler silo and the other for the filler use bin. Filler is a cheaper form of the limestone material. The filler is first off-loaded from a truck into a 120 ton, Hollow-Flayed filler silo. The material is transferred to a heater where it is heated to 300-400F. The material is then transferred to a holding bin. The limestone and asphalt are mixed and moved by a paddle mixer and screw conveyor to the coating unit. Line #3 is similar in operation to Line #1, except for a few differences in equipment including that the granules are stored in nineteen silos and the sand in one. Two 80 ton silos contain the filler material which is entered straight into the process.

BACKGROUND
From the TCEQ Compliance History website: (rated 09/01/2011, posted 11/15/2012)
Compliance history rating/performance classification: "0", HIGH

Current Enforcement Actions: None
Agreed Orders, Court Orders, & Other Compliance Agreements: None
Complaints:
04/01/2009; Inv #742818, Inc #122879 - No violations alleged
Prior Enforcement Issues:
06/30/2009; Inv #759688-NOV for 116.110(a),116.116(A)(1)and 40CFR 60.48(g):
Resolved-12/8/2009; Inv #784743.

ADDITIONAL INFORMATION
Conclusions and Recommendations: No unregulated increases in any air contaminants or nuisance potentials are associated with this project. Recommend acceptance of permit modification.

Attachments:
Attachment 1 --Request for Comments

No Violations Associated to this Investigation

Signed Marilyn F. Turner Date 22 Jan 13
Environmental Investigator

Signed Joni M. Keech Date _____
Supervisor

Attachments: (in order of final report submittal)

___Enforcement Action Request (EAR)

___Letter to Facility (specify type) : _____

Investigation Report

___Sample Analysis Results

___Manifests

___NOR

___Maps, Plans, Sketches

___Photographs

___Correspondence from the facility

X Other (specify) :
DRFC
–

ATTACHMENT 1
01/17/2013

GAF MATERIALS
(RN100788959)
GAF BUILDING MATERIALS CORPORATION
(CN601108897)

Request for Comments -- Draft Conditions
TCEQ -- Air Permits Division
Phone: (512)239-1250
Fax: (512)239-1300
Mailing Address: TCEQ, Air Permits, P.O. Box 13087, Austin, TX 78711-3087

TO: Region:**4** City:**Dallas** County:**Dallas** Account No.:**DB-0378-S**

Submitted by:**Mr. Joel Stanford** E-Mail ID:**Joel.Stanford** Phone:**(512) 239-0270**

Date Request Submitted:**January 14, 2013**

Comments Deadline:**February 4, 2013**

For deadlines less than 21 days Section Manager approval is required.

Date Application Received by TCEQ in Austin:**September 28, 2012**

REGIONAL OFFICES: Please return comments ASAP, but no later than the comments deadline which is 21 days from the submittal date. Permit disposition will proceed after comments are received or after the comments deadline has passed.

LOCAL PROGRAMS: The company below has submitted an application for the project referenced below in accordance with regulations of the TCEQ. Please return comments ASAP, but no later than the comments deadline which is 21 days from the submittal date. Permit disposition will proceed after comments are received or after the comments deadline has passed. Permit Reviewer may request faster response if needed. If no comments are received within this time frame, we will assume you have no comments or objections to the project as proposed. Please return a complete copy of the form (both sides) with your comments.

PROJECT TYPE:**Amendment**

NEWLY AUTHORIZED MSS? _____YES _____NO

PROJECT NO.:**183376**

REGULATED ENTITY NO.:**RN100788959**

PERMIT NO.:**7711A**

COMPANY NAME:**Building Materials Corporation Of America**

CUSTOMER REFERENCE NO.:**CN602717464**

PLANT NAME:**Gaf Materials**

LOCATION:**2600 Singleton Blvd**

UNIT NAME:**Asphalt Roofing Production Facility**

COUNTY:**Dallas**

TECHNICAL CONTACT:**DurwinFarlough**

PHONE:**(214) 637-8977**

OPERATING SCHEDULE: Continuous? ___

Hours/Day_____ Days/Week_____ Weeks/Year _____ Night Operation?_____

Engineer's Comments:The only change is the replacement of a boiler with a larger unit and expanding its hours of operation to year 'round. Accordingly, the MAERT has adjusted rates, and a special condition relating to hours of operation of the older unit has been removed.

Attachments: **MAERT,** **Draft Conditions**

Request for Comments -- Draft Permit
RESPONSE

TO: **Mr. Joel Stanford, Austin**

FROM: Region:**4** City:**Dallas** County:**Dallas** Account No.:**DB-0378-S**

Copy of Application Received by your Office: [redacted] NO Date Received: 14 January 2013

COMPANY NAME:Building Materials Corporation Of America

PERMIT NO.:7711A

REGULATED ENTITY NO:RN100788959 **PROJECT NO.:183376**

Investigator's/Compliance Officer's Name (Please Print): Marilyn Fitzner

Phone: (214) 948-4190

Comments Deadline (from pg. 1): **February 4, 2013**

Date of Last Site Visit: 09 February 2010

COMMENTS ON CONDITIONS: (Please mark up draft special conditions with your comments. Please address applicability and enforceability. List any additional conditions below):

Please note that the scope of the review is typically limited to the affected sources within the project, although suggestions to improve the enforceability of conditions not related to the specific permit action may be provided with justification. Please also note that changes in permit stringency during a renewal process must meet the criteria of Texas Health and Safety Code 382.055(e) and should be submitted with justification.

Compliance Determination Conditions: The requested changes for the permit are due to replacement of a boiler with a larger unit and the related adjusted changes to the MAERT Table. The only items changing are higher air contaminant emission standards for two facility emission points, HTR5 and BLR5.

Operational Limitations: The new emission rates are within regulations.

GENERAL COMMENTS: :

PERMIT ISSUANCE:

If you have any objections to issuance, please note them here:
None

Special Conditions

Permit Number 7711A

Emission Limitations

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in the attached table. **(8/10)**

Fuel Specifications

2. Fuel for the facilities shall be pipeline-quality, sweet natural gas. Use of any other fuel shall require prior written approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ). **(8/10)**

3. Upon request by the Executive Director of the TCEQ, the TCEQ Regional Director, or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel utilized in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis. **(8/10)**

Federal Applicability

4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in Title 40 Code of Federal Regulations (40 CFR) Part 60 promulgated for Asphalt Processing and Asphalt Roofing Manufacture in Subpart UU, for Small Industrial-Commercial-Institutional Steam Generating Units in Subpart Dc, and with the General Provisions set forth in Subpart A. **(8/10)**

5. These facilities shall comply with all applicable requirements of the EPA regulations on National Emission Standards for Hazardous Air Pollutants for Area Sources in 40 CFR Part 63 promulgated for Asphalt Processing and Asphalt Roofing Manufacture, Subparts A and AAAAAAA. **(8/10)**

Opacity/Visible Emission Limitations

6. In accordance with the EPA Test Method (TM) 9 or equivalent, and except for those periods described in Title 30 Texas Administrative Code (30 TAC) §§ 101.201 and 101.211, opacity of emissions from the Coalescing Filter Mist Systems (Emission Point No. [EPN] CFL/34), the Electrostatic Precipitator (EPN CFL/34) when used as a back-up control device for the filter mist systems, all dust collector stacks, all process heater vents, and building vents shall not exceed 5 percent averaged over a six-minute period. **(8/10)**

7. In accordance with the U.S. EPA TM 9 or equivalent, and except for those periods described in 30 TAC §§ 101.201 and 101.211, opacity of emissions from any asphalt storage

tank exhaust gases discharged into the atmosphere shall not exceed 0 percent averaged over a six-minute period, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing. The control device shall not be bypassed during this 15-minute period. Opacity of emissions from any blowing still shall not exceed 0 percent averaged over a six-minute period. Opacity of emissions from any storage silo and mineral handling facility shall not exceed 1 percent averaged over a six-minute period. **(8/10)**

8. No visible emissions from the asphalt processing and asphalt roofing manufacturing operations and facilities, roads, or travel areas shall leave the property. Visible emissions shall be determined by a standard of no visible emissions exceeding 30 seconds in duration in any six-minute period as determined using the U.S. EPA TM 22 or equivalent. If this condition is violated, additional controls or process changes may be required to limit visible particulate matter (PM) emissions. Stack emissions may leave the plant property provided that opacity restrictions are not violated. **(8/10)**

Operational Limitations, Work Practices, and Plant Design

9. All filler and backing material shall be received and transferred within the building with no visible emissions leaving the building. **(8/10)**

10. The emissions from Stillyard Asphalt Storage Tank Nos. T-1, T-2, T-8, T-9, T-10, T-14, T-15, T-110, and T-120; from Blowing Stills T-13 and T-26; from truck and railcar loading and unloading operations; and from the self-seal asphalt storage tank shall be vented to the direct-flame incinerator. **(8/10)**

11. Upon issuance of the amended permit, the direct-flame incinerator shall be operated at an average incineration temperature of 1450°F measured immediately downstream of the incinerator, based on a one-hour averaging period, during normal operations. Normal operations are herein defined as any time period when asphalt blowing is occurring, and emissions from the blowing are vented to the direct-flame incinerator. The direct-flame incinerator shall be operated at a minimum incineration temperature of 1300°F during Standby Operating Conditions to assure compliance with the maximum allowable emission rates table (MAERT) limits for volatile organic compounds (VOC) from EPN 8/8A. Standby operating conditions are herein defined as when no process blowers are in operation on any blowing still venting to the direct-flame incinerator. **(8/10)**

12. After issuance of the amended permit, the permit holder is allowed to conduct stack sampling of the direct-flame incinerator during normal operations at an average temperature lower than 1450°F to demonstrate compliance with the MAERT limits for VOC from EPN 8/8A. Upon demonstration of compliance with the MAERT limits for VOC, the permit holder shall submit a permit action to modify the temperature requirement of the direct-flame incinerator during Normal Operations. **(8/10)**

13. The maximum allowable asphalt throughput rates are 32,063 pounds per hour for Line 1 and 53,438 pounds per hour for Line 3. **(8/10)**

14. The maximum allowable production rates for both Line 1 and Line 3, combined, are 171 tons per hour and 1,498,000 tons per year of finished shingles. **(8/10)**

15. An opacity violation or an odor nuisance condition, as confirmed by the TCEQ or any local air pollution control program with jurisdiction, may be cause for additional controls. If the nuisance condition persists, subsequent stack sampling may also be required.

16. All in-plant roads and areas subject to road vehicle traffic shall be paved with a cohesive hard surface and cleaned, as necessary, to maintain compliance with the TCEQ rules and regulations. Unpaved work areas shall be sprayed with water and/or environmentally sensitive chemicals upon detection of visible PM emissions to maintain compliance with all TCEQ rules and regulations.

17. All stacks associated with the Line 1 Cooling Section (EPN COOL1) shall be no less than 64 feet measured from ground level. All stacks associated with the Line 3 Cooling Section (EPN COOL3) shall be no less than 73 feet measured from ground level. **(8/10)**

18. There shall be no changes in representations unless the permit is altered or amended. **(8/10)**

Continuous Determination of Compliance

19. Upon being informed by the TCEQ Executive Director that the staff has documented visible emissions that exceed the specified opacity limits, the holder of this permit may be required to conduct stack sampling analyses or other tests to prove satisfactory abatement or process equipment performance and demonstrate compliance with the PM and VOC allowable emissions specified in the MAERT. Sampling must be conducted in accordance with appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with applicable EPA CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. **(8/10)**

20. The TCEQ Executive Director may require the permit holder to perform stack sampling or ambient air monitoring to determine the opacity, rate, composition, and/or concentration of the plant's emissions. The holder of this permit may request the TCEQ Executive Director to approve alternate sampling techniques or other means to determine the opacity, rates, composition, and/or concentration of emissions in accordance with 30 TAC § 101.8. **(8/10)**

21. All stack sampling shall be conducted within 60 days of being informed that testing is required, and it shall meet all requirements specified in the Sampling Requirements section of this permit's special conditions. **(8/10)**

22. For any asphalt storage tank and storage silo and mineral handling facility, visible emissions observations shall be made and recorded once per week. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If the result of the Test Method 9 is opacity above the corresponding opacity limit, the permit holder shall report a deviation. **(8/10)**

23. For any blowing still, visible emissions observations shall be made and recorded once per week. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit is the corresponding opacity limit associated with the particulate matter standard in the underlying requirement. If there is no corresponding opacity limit in the underlying applicable requirement, the maximum opacity will be established using the most recent performance test. If the result of the Test Method 9 is opacity above the corresponding opacity limit (associated with the particulate matter standard in the underlying applicable requirement or as identified as a result of a previous performance test to establish the maximum opacity limit), the permit holder shall report a deviation. **(8/10)**

24. The temperature in the combustion chamber or immediately downstream of the combustion chamber of the direct-flame incinerator shall be measured and recorded four times per hour with an averaging period of one hour. The permit holder shall establish a minimum combustion temperature using the most recent performance test, manufacturer's recommendations, engineering calculations, and/or historical data. The

monitoring instrumentation shall be maintained, calibrated, and operated in accordance with manufacturer's specifications or other written procedures. Any monitoring data below the minimum limit shall be considered and reported as a deviation. **(8/10)**

Sampling Requirements

25. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling ports and platforms shall be installed on the exhaust stack according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Executive Director.

26. The plant shall operate at the maximum shingle production and raw material throughput rates and operating parameters, represented in the confidential file, during stack emissions testing being conducted for continuing compliance demonstrations. If the plant is unable to operate at the maximum rates during compliance testing, then the production/throughput rates or other parameters may be limited to the rates established during testing. If stack testing was not accomplished at the maximum production/throughput rates, then such testing may be required prior to actual operations at the maximum rates. **(8/10)**

27. A pretest meeting concerning any required stack sampling and/or ambient air monitoring shall be held with personnel from the appropriate TCEQ Regional Office before the required tests are performed. Air contaminants to be tested for and the test methods to be used shall be determined at this pretest meeting.

    The TCEQ Regional Office shall be notified no less than 45 days prior to sampling to schedule a pretest meeting. The notice to the TCEQ Regional Office shall include:

    A. Date for pretest meeting;
    B. Date sampling will occur;
    C. Name of firm conducting sampling;
    D. Type of sampling equipment to be used; and
    E. Method or procedure to be used in sampling.

    The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test results.

28. Air contaminants to be tested for may include (but are not limited to) PM, CO, SO_2, NO_x, and VOC.

29. A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the

TCEQ prior to the pretest meeting. The TCEQ Regional Office shall approve or disapprove of any deviation from specified sampling procedures.

30. The sampling report shall include the following: **(8/10)**

    A. Plant production and throughput rates during tests; and
    B. Direct-flame incinerator operating temperature during tests.

31. Copies of the final sampling report shall be submitted within 30 days after sampling is completed. Sampling reports shall comply with the provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows: **(8/10)**

    One copy to the TCEQ Dallas/Fort Worth Regional Office; and
    One copy to each appropriate local air pollution control program.

32. Requests to waive testing for any pollutant specified in the above special conditions shall be submitted to the TCEQ Office of Air, Air Permits Division.

Recordkeeping Requirements

33. In addition to the recordkeeping requirements specified in General Condition No. 7, 40 CFR Part 60, Subparts A, Dc, and UU, and 40 CFR Part 63, Subparts A and AAAAAAA, the following records shall be kept and maintained on-site for a rolling 60-month period: **(1/12)**

    A. Records of the exhaust gas temperature immediately downstream of the direct-flame incinerator to demonstrate compliance with 30 TAC § 115.126(1)(A)(i). These records shall be maintained on-site for at least five years;

    B. Records of either VOC concentration or mass emission rate of each vent gas stream for the Line 1 and Line 3 Cooling Sections at maximum actual operating conditions to demonstrate compliance with 30 TAC § 115.126(4). These records shall be maintained on-site for at least five years;

    C. Hourly asphalt throughput rates for Line 1 and for Line 3;

    D. Combined Line 1 and Line 3 hourly and annual production rates of finished shingles;

    E. Records of asphalt stored and used, that have the potential to emit Hazardous Air Pollutants [HAP], shall be kept in sufficient detail in order to allow all required emission rates to be fully and accurately calculated. Using this recorded data, a report shall be produced for the emission of HAPs (in tons per year) over the previous 12 consecutive months;

    F. Records of repairs and maintenance of all pollution abatement equipment;

G. Records of road cleaning, application of road dust control, or road maintenance for dust control; and

H. All monitoring data and support information as specified in 30 TAC § 122.144.

Dated:

Emission Sources - Maximum Allowable Emission Rates

Permit Number 7711A

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
HTR3	T-1 Laminating Adhesive Bulk Storage Tank Heater Vent	NO_x	0.05	0.22
		SO_2	0.01	0.01
		PM	0.01	0.02
		PM_{10}	0.01	0.02
		$PM_{2.5}$	0.01	0.02
		CO	0.04	0.18
		VOC	0.01	0.01
HTR4	T-2 Laminating Adhesive Bulk Storage Tank heater Vent	NO_x	0.05	0.22
		SO_2	0.01	0.01
		PM	0.01	0.02
		PM_{10}	0.01	0.02
		$PM_{2.5}$	0.01	0.02
		CO	0.04	0.18
		VOC	0.01	0.01
HTR5	Asphalt Heater for T-14 and T-15 Coating Asphalt Storage and Coating Feed Loop	NO_x	0.82	3.59
		SO_2	0.01	0.04
		PM	0.16	0.70
		PM_{10}	0.16	0.70
		$PM_{2.5}$	0.16	0.70
		CO	1.73	7.58

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		VOC	0.11	0.48
BLR5	Boiler Vent	NO_x	0.82	3.59
		SO_2	0.01	0.04
		PM	0.16	0.70
		PM_{10}	0.16	0.70
		$PM_{2.5}$	0.16	0.70
		CO	1.73	7.58
		VOC	0.11	0.48
8/8A	Thermal Oxidizer Exhaust through Waste Heat Boiler Stack	NO_x	1.90	8.31
		SO_2	29.35	128.55
		PM	2.62	11.46
		PM_{10}	2.62	11.46
		$PM_{2.5}$	2.62	11.46
		CO	11.34	49.65
		VOC	0.09	0.37
WHBLR1	Waste Heat Recovery Boiler Natural Gas Burner Side	NO_x	0.47	2.06
		SO_2	0.01	0.04
		PM	0.11	0.48
		PM_{10}	0.11	0.48
		$PM_{2.5}$	0.11	0.48
		CO	1.24	5.43
		VOC	0.08	0.35

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CFL	Coalescing Filter Mist Elimination Systems (to control emissions from the Line 1 and Line 3 Asphalt Coaters) with ESP as backup	PM	0.63	2.76
		PM_{10}	0.63	2.76
		$PM_{2.5}$	0.63	2.76
		VOC	5.76	25.23
1-1	Line 1 Stabilizer Storage and Heater Baghouse Stack	PM	0.23	1.01
		PM_{10}	0.23	1.01
		$PM_{2.5}$	0.23	1.01
1-3	Line 1 Stabilizer Use Bin Baghouse Stack	PM	0.03	0.13
		PM_{10}	0.03	0.13
		$PM_{2.5}$	0.03	0.13
1-4	Line 1 Surfacing Section Dust Collector No. 1 Stack	PM	0.59	2.58
		PM_{10}	0.59	2.58
		$PM_{2.5}$	0.59	2.58
1-5	Line 1 Surfacing Section Dust Collector No. 2 Stack	PM	0.59	2.58
		PM_{10}	0.59	2.58
		$PM_{2.5}$	0.59	2.58
1-6	Line 1 Surfacing Section Dust Collector No. 3 Stack	PM	0.59	2.58
		PM_{10}	0.59	2.58
		$PM_{2.5}$	0.59	2.58
Cool 1	Line 1 Cooling Section (3 stacks)	PM	8.52	37.30
		PM_{10}	8.52	37.30
		$PM_{2.5}$	8.52	37.30
		VOC	1.65	7.23

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
25	Sand Application Baghouse	PM	1.50	6.57
		PM_{10}	1.50	6.57
		$PM_{2.5}$	1.50	6.57
26A	Stabilizer Storage Baghouse A	PM	0.15	0.70
		PM_{10}	0.15	0.70
		$PM_{2.5}$	0.15	0.70
26B	Stabilizer Storage Baghouse B	PM	0.29	1.26
		PM_{10}	0.29	1.26
		$PM_{2.5}$	0.29	1.26
27	Stabilizer Heater Baghouse	PM	0.09	0.40
		PM_{10}	0.09	0.40
		$PM_{2.5}$	0.09	0.40
28	Asphalt Heater	NO_x	0.59	2.60
		SO_2	<0.01	0.02
		PM	0.04	0.20
		PM_{10}	0.04	0.20
		$PM_{2.5}$	0.04	0.20
		CO	0.50	2.20
		VOC	0.03	0.10
FUG1	Plant-wide Fugitive Emissions	PM	0.91	3.97
		PM_{10}	0.91	3.97
		$PM_{2.5}$	0.91	3.97
		VOC	0.43	1.88

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
COOL3	Line 3 Cooling Section (3 stacks)	PM	6.74	29.52
		PM_{10}	6.74	29.52
		$PM_{2.5}$	6.74	29.52
		VOC	0.03	0.14
HTR6	Line 3 Stabilizer Thermal Fluid Heater Vent	NO_x	0.60	2.58
		SO_2	0.01	0.02
		PM	0.05	0.20
		PM_{10}	0.05	0.20
		$PM_{2.5}$	0.05	0.20
		CO	0.49	2.16
		VOC	0.03	0.14

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
HAP - hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.

Date: _____